

CITY OF MESA, ARIZONA

**ENERGY RESOURCES
DEPARTMENT**

**FISCAL YEAR 13/14 BUDGET &
CAPITAL IMPROVEMENT PROGRAM**

4.25.13



SINCE 1917...

Mesa's electric and gas utilities have been providing Safe, Reliable, and Efficient energy utility services

Electric Utility

- 16,041 residential and commercial customers
- 5.5 sq. mi. centered around downtown Mesa

Gas Utility

- 57,641 residential and commercial customers
- 90 sq. mi. in Mesa & 236 sq. mi. in Pinal County



FY 12/13 INNOVATIONS

- Light Rail Business Retention Program with Neighborhood Economic Development Corporation (NEDCO)
- High Speed Switches
- Mobile Generators
- Electric Vehicles Charging Station Pilot
- Pilot Solar Incentive program
- Hoover
- 2012 Presidential Debate
- Marketing Compressed Natural Gas (CNG) Vehicles to Commercial Fleets
- Succession Planning

FY 13/14 BUDGET



FY 13/14 INNOVATIONS

FY 13/14 INNOVATIONS (BEGUN IN FY 12/13)

- Continue Light Rail Business Retention Program
- High Speed Electric Switches
- Modify Pilot Solar Incentive program
- Continue pursuit of Hoover electric energy supply
- Proposed CNG Station (CIP Funded)
 - Feasibility & Planning Phase
 - Solid Waste Assessment-Council Presentation In May
- Implement & Continue to Enhance Succession Plan



FY 13/14 INNOVATIONS

- Electric Undergrounding(CIP Funded)
- Electric Smart Grid(CIP Funded)
- Advanced Metering Technology Pilot In MAGMA (CIP Funded)
- Gas Cogeneration in Mesa Schools
- Veteran Recruiting & Training



FY 12/13 & 13/14 DEPARTMENT BUDGETS

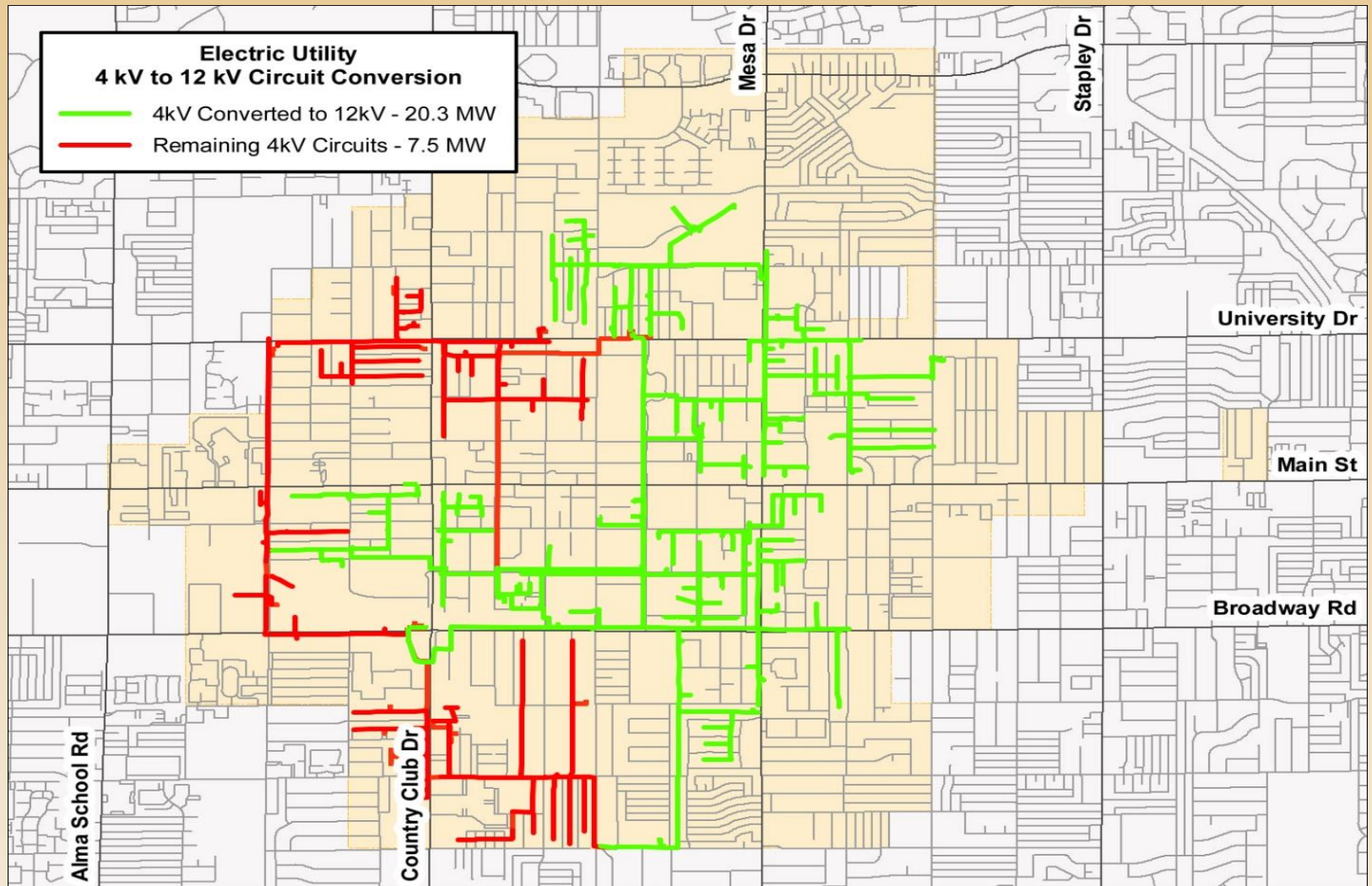
EXPENDITURES	2012-13 ADOPTED	2012-13	2013-14 PROPOSED
	BUDGET	YEAR-END ESTIMATE	BUDGET
PERSONAL SERVICES	\$9,120,379	\$8,936,708	\$9,391,411
OTHER SERVICES	\$2,409,735	\$2,112,186	\$2,313,952
COMMODITIES	\$32,198,886	\$29,850,956	\$31,630,292
PURCHASED CAPITAL	\$295,000	\$382,000	\$460
TOTAL	\$44,024,000	\$41,281,850	\$43,336,115
FUNDING SOURCES	2012-13 ADOPTED	2012-13	2013-14 PROPOSED
	BUDGET	YEAR-END ESTIMATE	BUDGET
GENERAL FUND	\$86,850	\$58,850	\$76,971
TRANSPORTATION RESTRICTED	\$250,447	\$201,669	\$294,674
ENTERPRISE	\$43,686,703	\$41,021,331	\$42,786,776
OTHER	\$0	\$0	\$177,694
TOTAL	\$44,024,000	\$41,281,850	\$43,336,115



FUNDED ELECTRIC CIP PROJECTS

2010 AUTHORIZATION

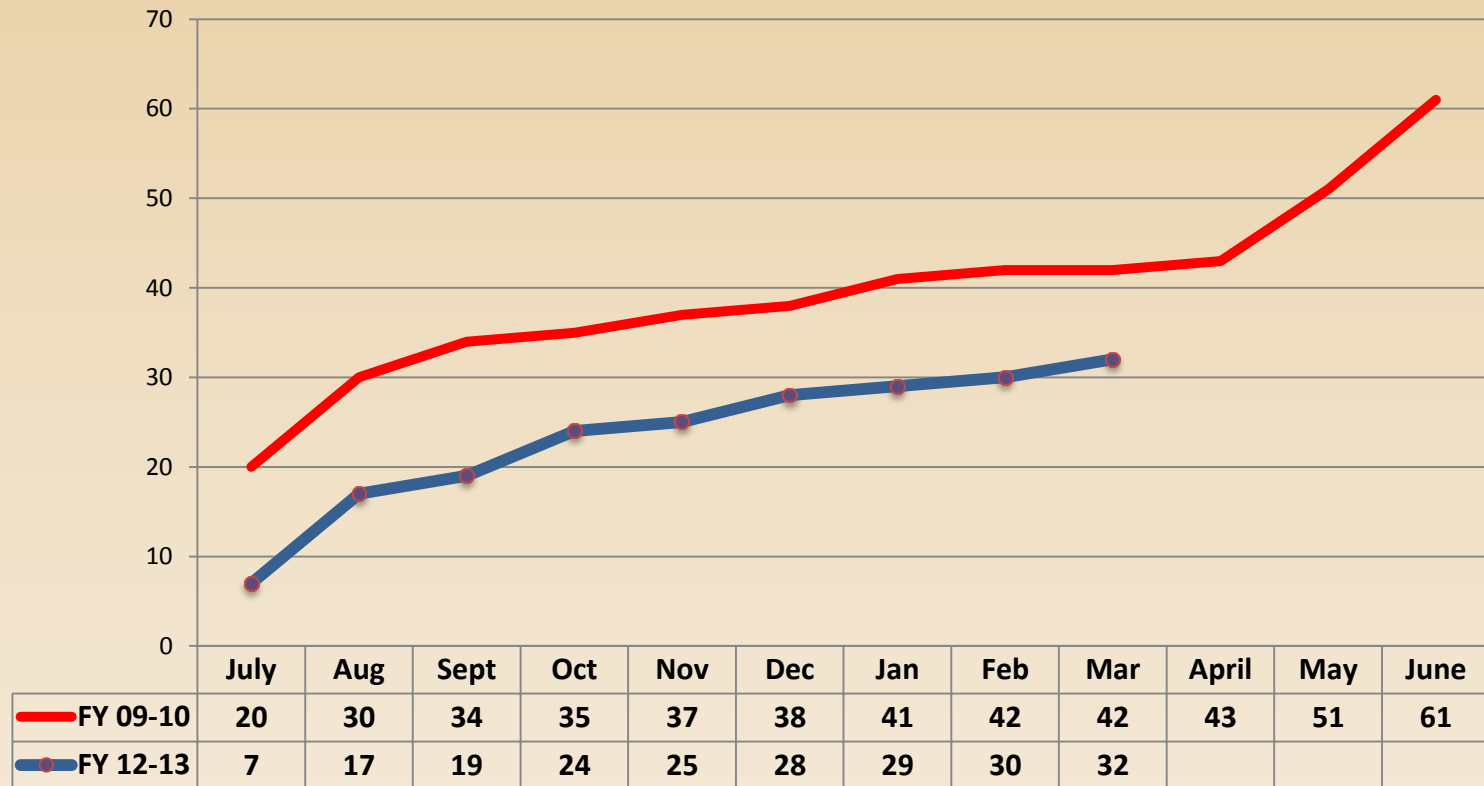
Electric \$ 15.9 million





4 kV TO 12 kV CONVERSION RELIABILITY IMPROVEMENTS

CUMULATIVE SERVICE INTERRUPTIONS FY 09/10 VS 12/13



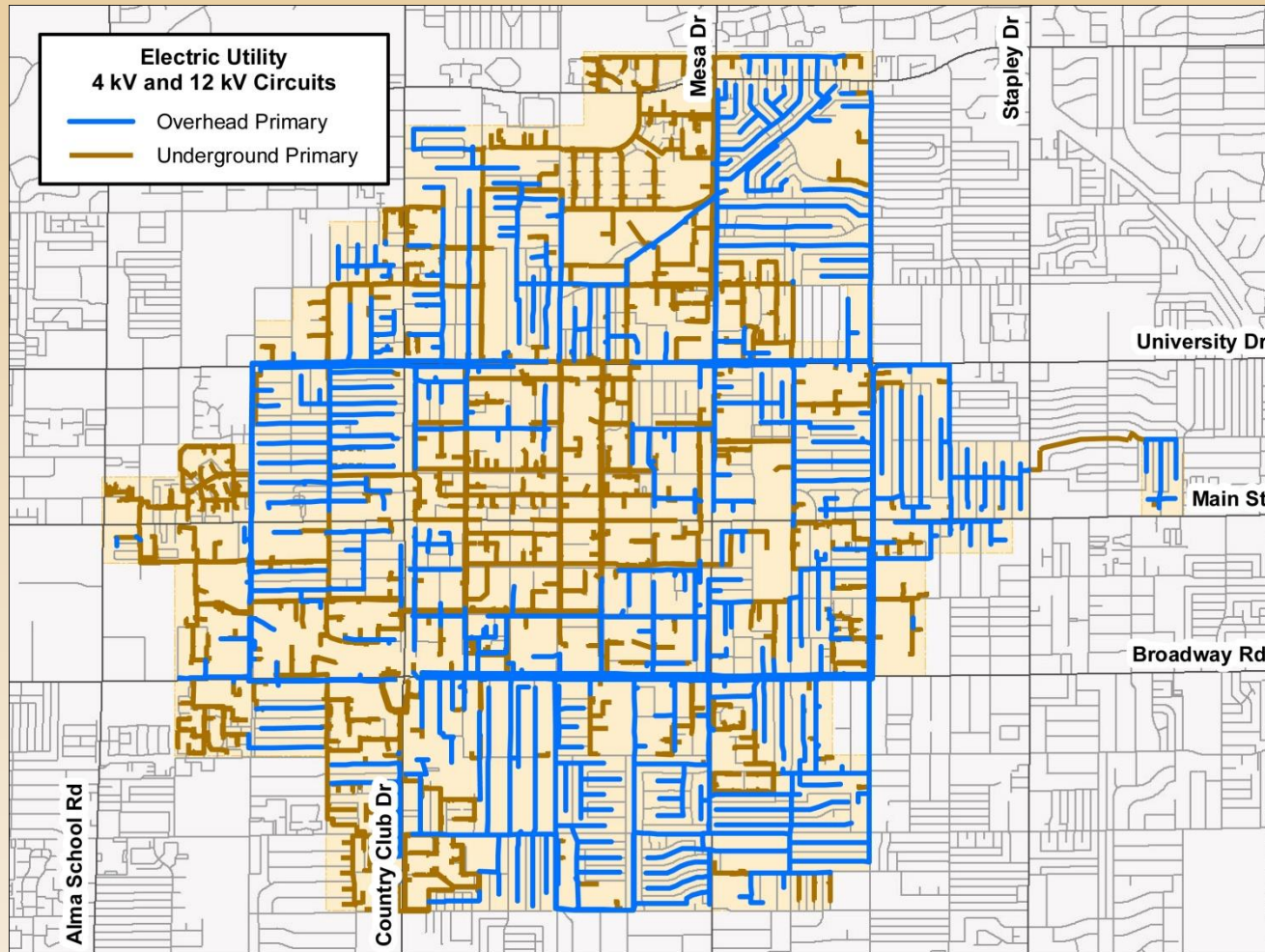


ELECTRIC OVERHEAD TO UNDERGROUND CONVERSIONS

- Underground electric distributions systems can be more safe & reliable than comparable overhead systems
- Mesa Dr. project provided unique opportunity
 - Southern to 8th Avenue
 - Removal of Overhead Distribution Equipment
 - Installation of Underground Conduit & Wire
 - Six residents adjacent to Mesa Dr. converted to Underground
 - Telecomm & Pole removal - April 2013



OVERHEAD & UNDERGROUND





FUNDED ELECTRIC CIP

- Complete the 4 kV to 12 kV conversion
- Kellwood Substation
 - Complete 69kV/12kV Transformer
 - Complete Connections to 12kV
- Underground Network
- New & Upgraded Services to New & Expanding Customers
- Underground conversions
- Lifecycle, Repair & Replacements
- \$ 15.9 million authorized in 2010 will be 100% issued & spent by Spring 2014



FUNDED ELECTRIC CIP (NON-BOND)

- Mobile/Emergency Electric Generators w/ Fire Dept.
- Automatic Transfer Switches(2)
- Install underground Electric with Main Street Light Rail Construction
 - Service to Transit Oriented Development
 - Avoid traffic disruptions later on Main Street
 - Minimize costs to extend service to new/expanding customers
 - Expand availability of power connections available for special events & avoid need for mobile generators



PLANNED ELECTRIC CIP PROJECTS

NEW AUTHORIZATION NEEDED



PLANNED ELECTRIC CIP

- New & Upgraded Services/New & Expanding Customers
- Undergrounding
 - Mesa Drive: 8th Ave to 6th St
 - Expansion of Underground Distribution System & Overhead Conversions
- Lifecycle Replacement and Enhancements to 12 kV Substations (Transformers, switchgear)



FUNDED GAS CIP PROJECTS

2010 AUTHORIZATION

Gas \$ 48.4 million



MESA DR. AND SOUTHERN

- Joint Transportation, Water, Wastewater, and Electric project
- Safety & Reliability
- Lifecycle & Rehabilitation
- 21,500 linear feet of intermediate pressure and high pressure main replaced
- Started March 2012





HIGH PRESSURE MAIN EXT. TO WASTE MANAGEMENT/ CNG

- 9,200 feet of High Pressure Steel Main & Regulator Station
- Additional pipeline capacity to serve economic development projects
- Revenues: \$321k upfront and \$335k over the next five years
- Time (or Slow Fill) & Fast Fill for WM's Solid Waste vehicles & Fast Fill available to the Public





HIGH PRESSURE MAIN EXT. TO BANNER DESERT

- Banner Desert Cogeneration
- 940 feet of High Pressure Steel Main
- Total cost of \$279K;
Revenues:
\$242K upfront
and \$32K /year



Cogeneration is the simultaneous production of thermal (heat) and electric energy. Large engines generate electricity and the exhaust is used for water & space heating at the hospital campus



FUNDED GAS CIP

- High And Intermediate Pressure Gas Mains
- Advanced Metering Technology Pilot In MAGMA
- Service for Expanding & New Customers
 - Difficult To Accurately Forecast Bond Funding Requirements
 - 676 new residential in 1st 8 months of 12/13 & 635 new residential in 11/12 (12 months)
- Joint System Rehabilitation Projects
- \$ 48.4 million authorized in 2010 will be **100%** issued & spent by Spring 2015



PLANNED GAS CIP

**NEW AUTHORIZATION
NEEDED**



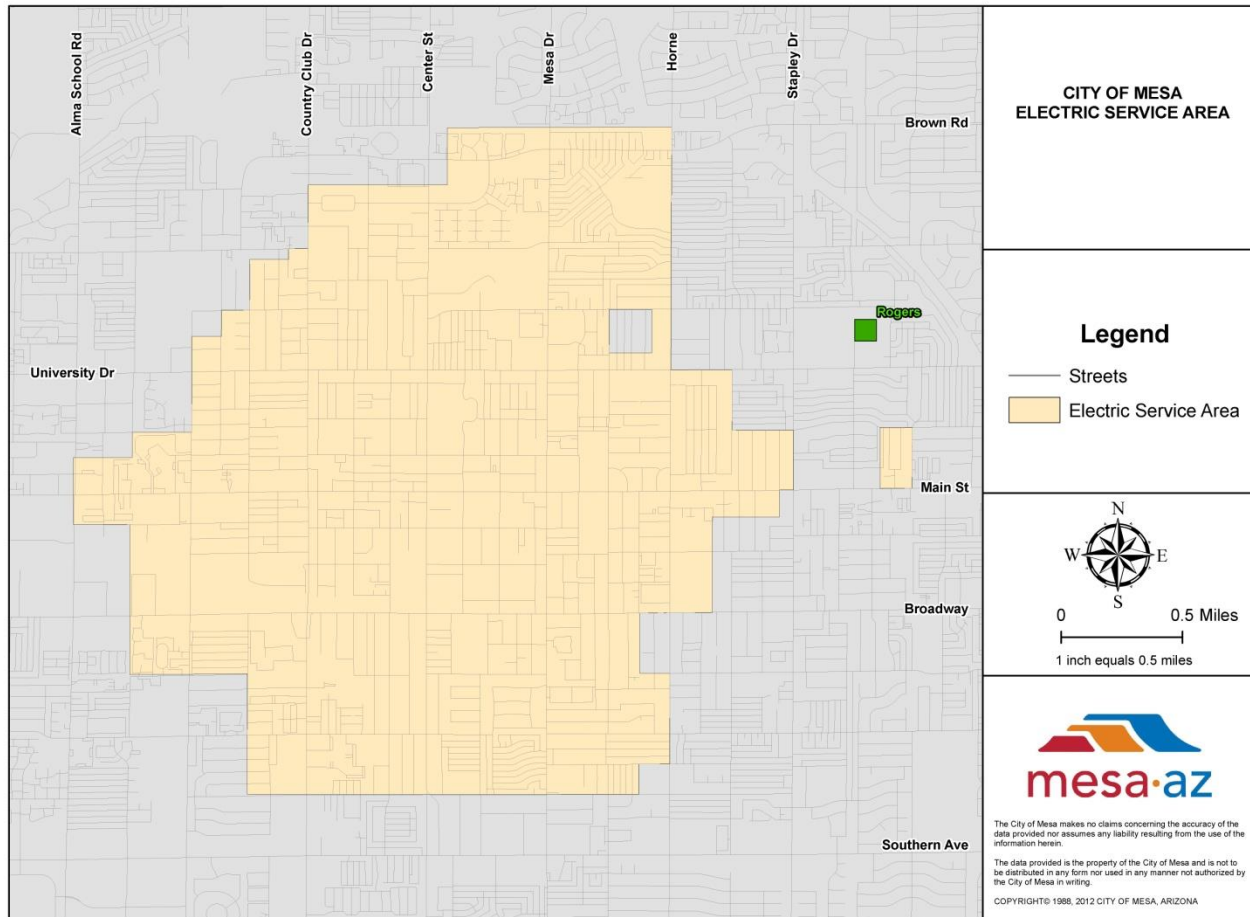
PLANNED GAS CIP

- High Pressure & Intermediate Pressure Gas Mains
 - Most are Joint System Rehabilitation Projects
 - Broadway - Country Club to Gilbert
 - Stapley - University to McKellips
 - Higley - McDowell to Thomas
 - Stapley and University
 - McKellips - Val Vista to Greenfield
- Service to New/Expanding Customers & Meters
- Another CNG station(s)



QUESTIONS?

Service Area - Electric



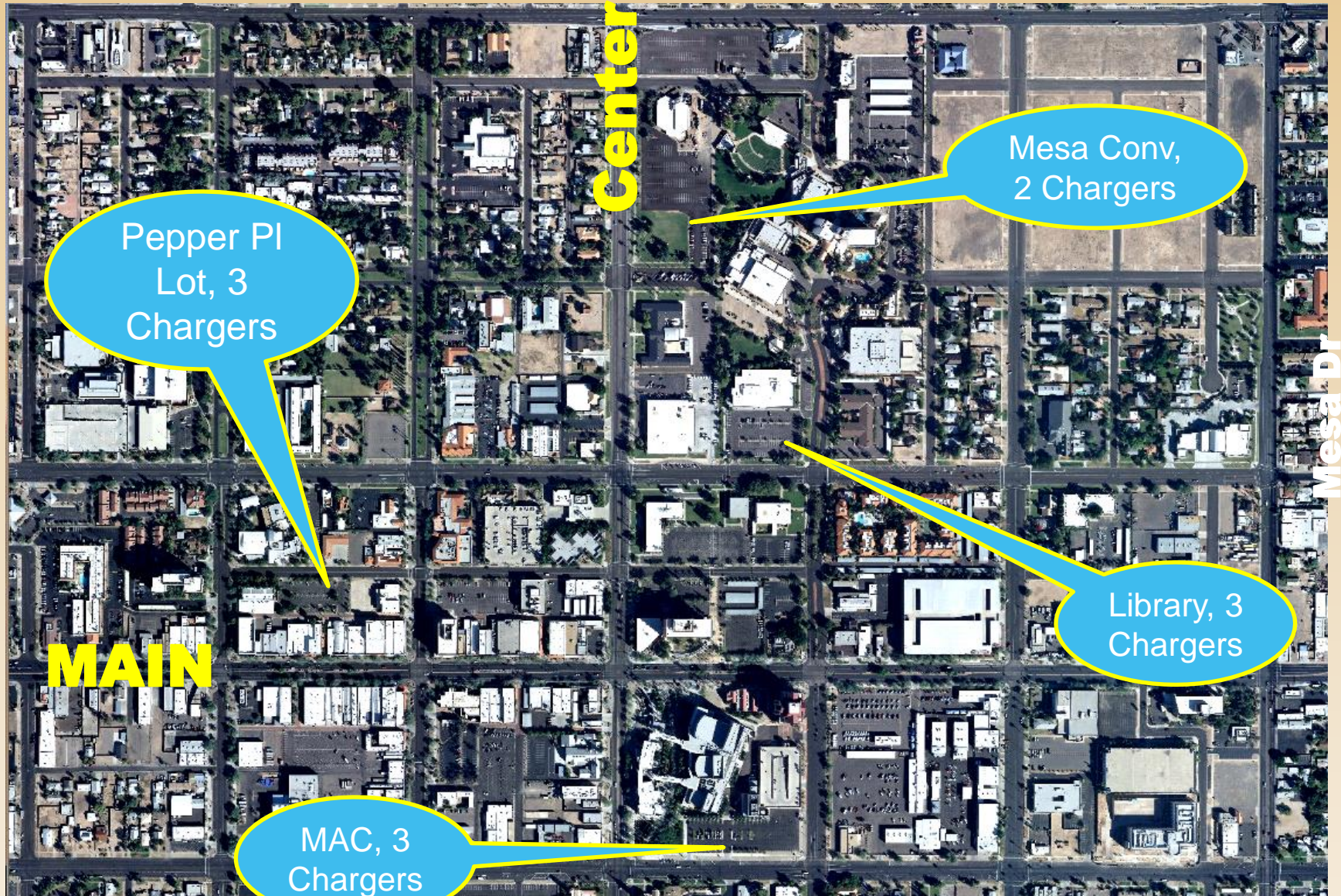


FY 13/14 INNOVATION

Electric Smart Grid

- Strategic implementation for Smart Grid technology, metering infrastructure and emergency management solutions for the City of Mesa Electric customers
- Improve operational efficiencies, and improve customer service by allowing customers to manage energy consumption
- Better prepare for disasters and emergency management

Electric Vehicle Charging Sites



Pepper Pl
Lot, 3
Chargers

Mesa Conv,
2 Chargers

Library, 3
Chargers

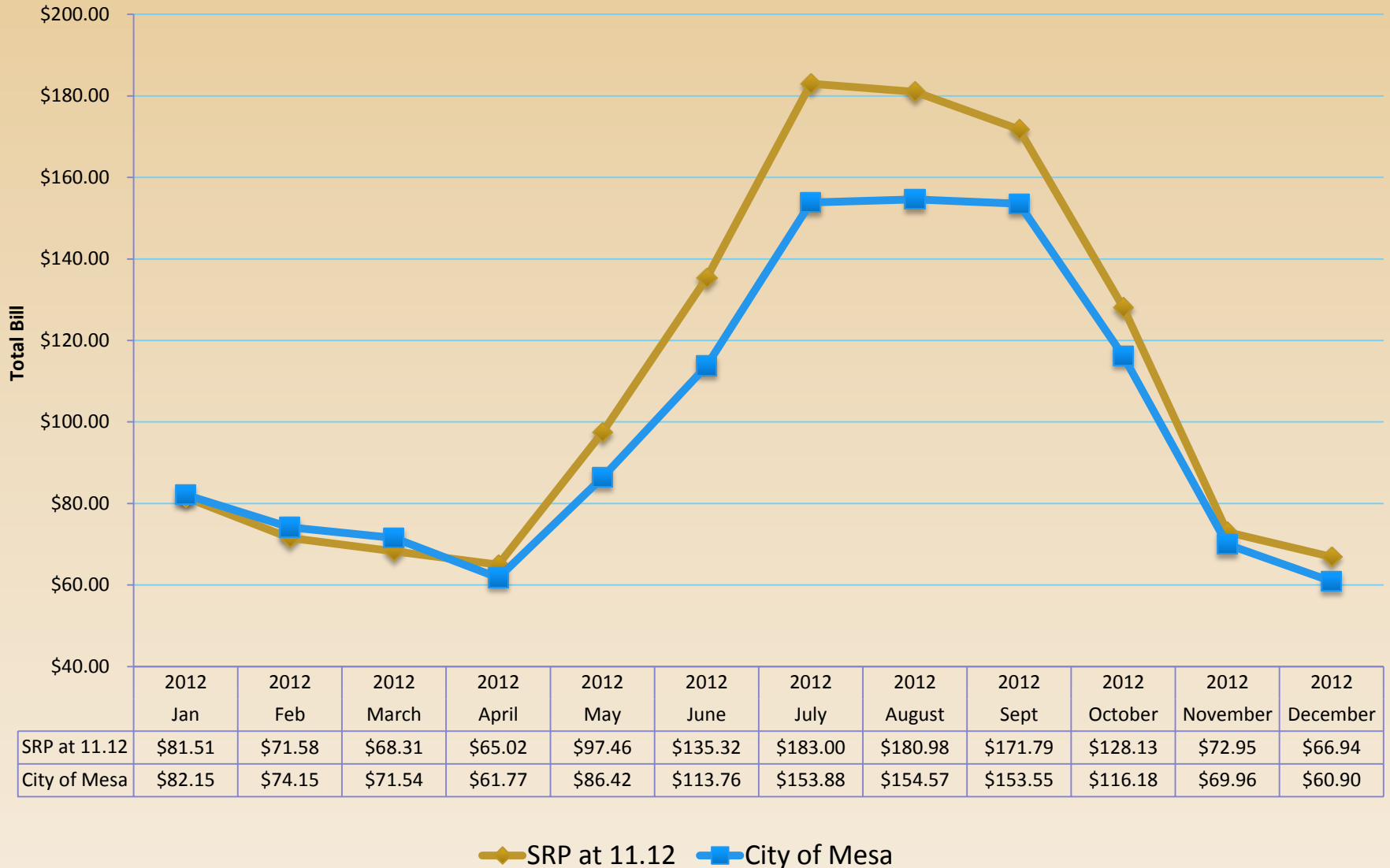
MAC, 3
Chargers



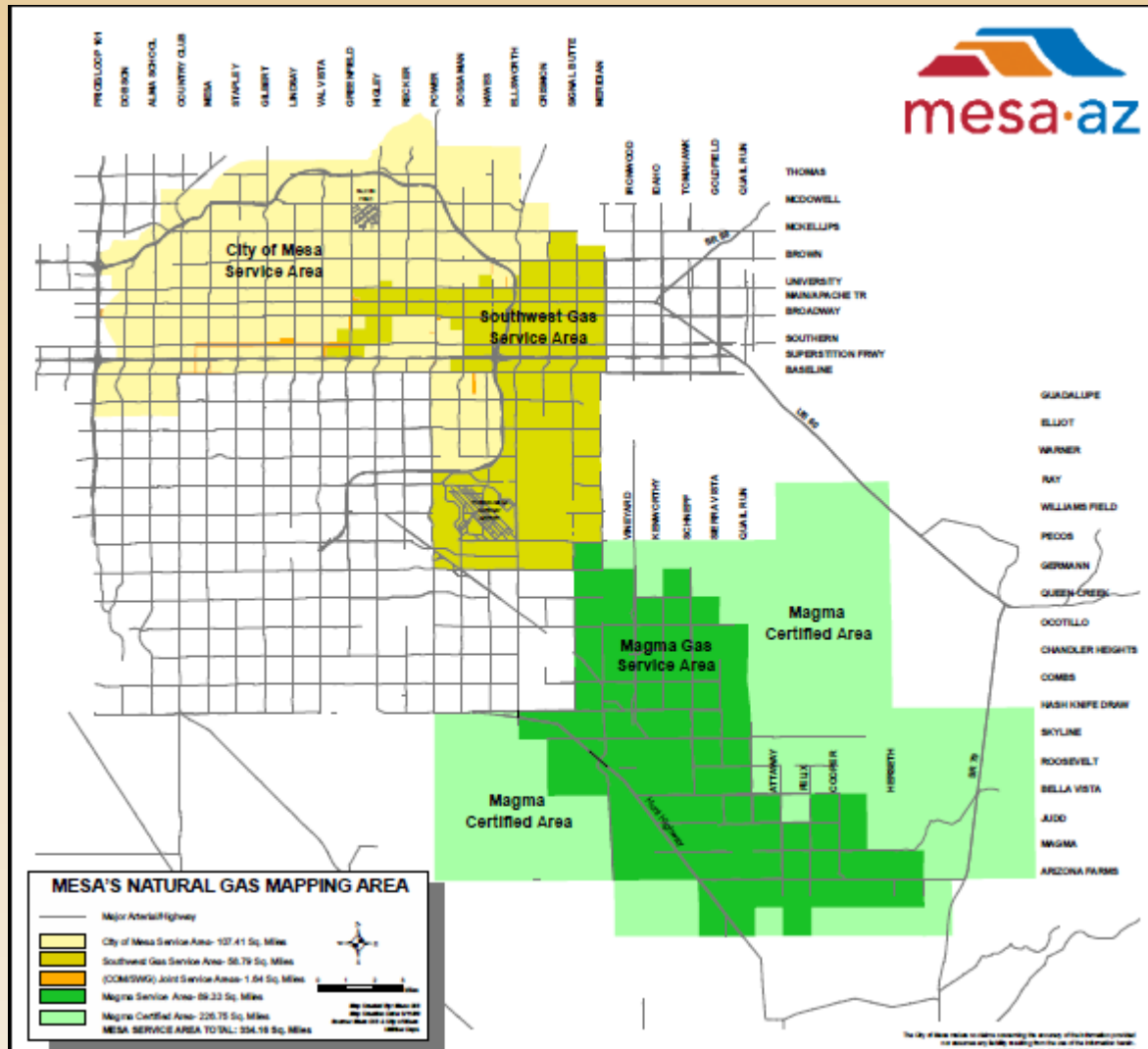
PERFORMANCE MEASUREMENTS

- Electric Reliability - Cumulative Frequency & Duration of outages below targets (benchmark is 25% lower than regional comparison)
- Annual, Average Residential Electric Gas Bill is \$124.16 less than SRP
- Electric has worked 1,774 days with no lost time accidents
- Electric Energy Supply Costs are 9% below budget

Residential Monthly Electric Bill



Service Areas - Gas

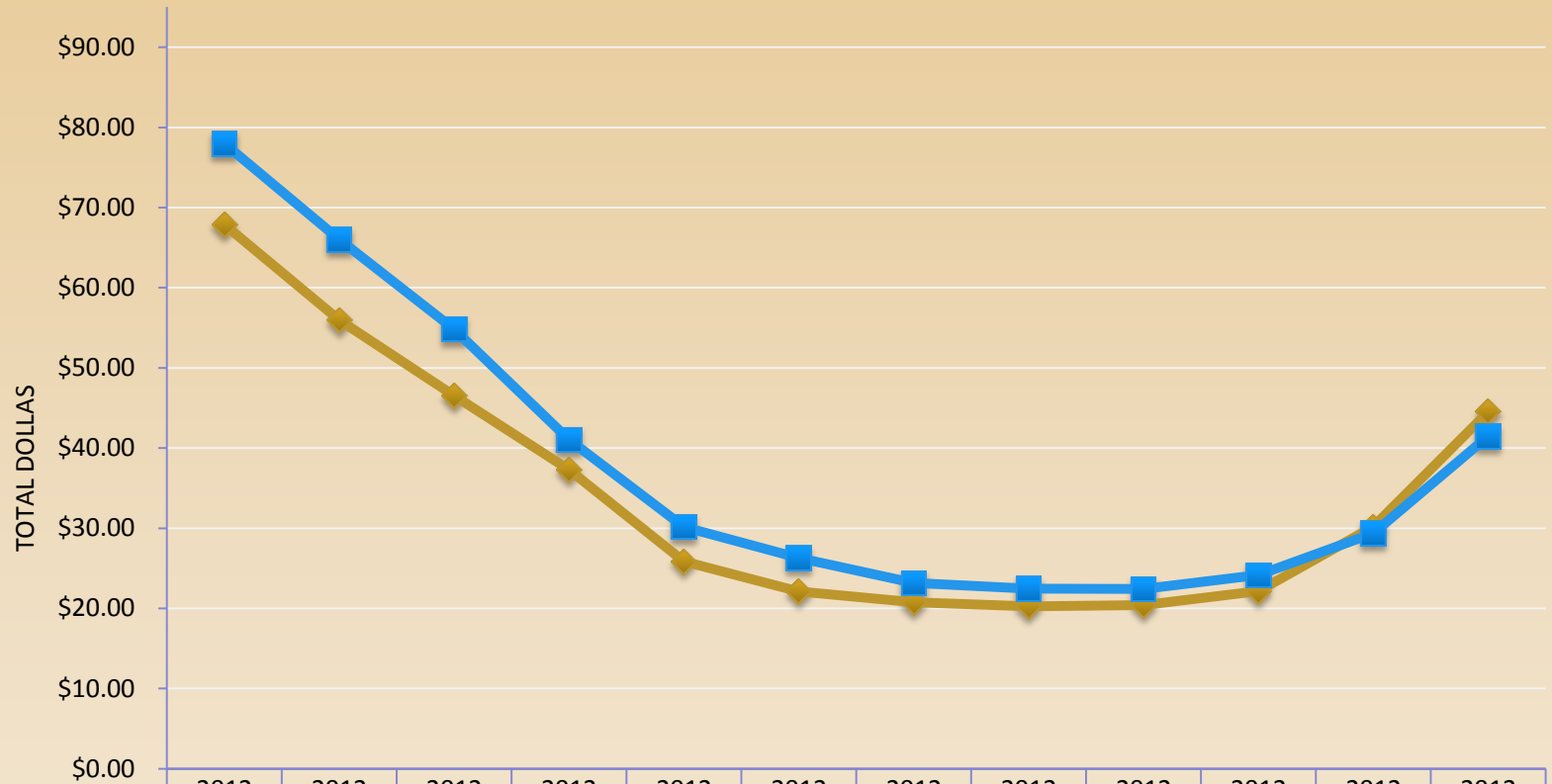




PERFORMANCE MEASUREMENTS

- Natural Gas Supply Costs are 11% below budget
- Annual, Average Residential Gas Bill is \$45.53 less than Southwest Gas
- Gas Emergency Response Times
 - Average response time (Target: 30 minutes)
 - Mesa: 19.7 minutes
 - Magma: 26.9 minutes
 - Percent of calls that exceed 30 minutes
 - Mesa: 2.1%
 - Magma: 21.8%
- 365 Days without a Lost Time Accident

MESA RESIDENTIAL NATURAL GAS BILL



◆ Residential Mesa
 ■ Residential SWG Mesa

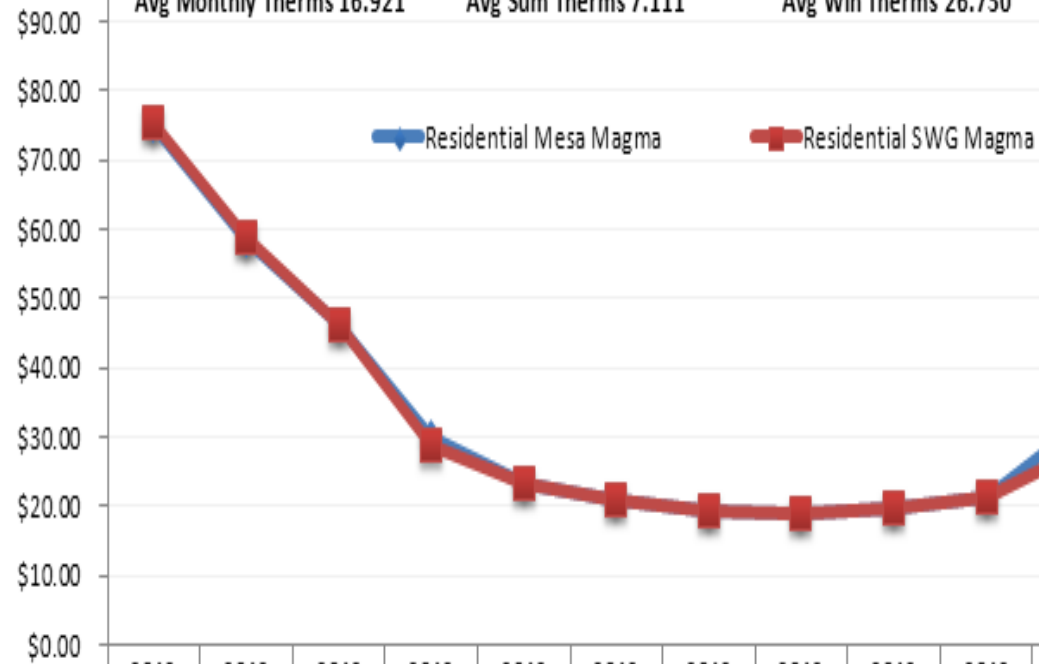
MAGMA MONTHLY RESIDENTIAL NATURAL GAS BILL

Avg Monthly Therms 16.921

Avg Sum Therms 7.111

Avg Win Therms 26.730

TOTAL DOLLARS



	2012 Jan	2012 Feb	2012 March	2012 April	2012 May	2012 June	2012 Jul	2012 Aug	2012 Sep	2012 Oct	2012 Nov	2012 Dec
Residential Mesa Magma	\$74.88	\$58.52	\$45.99	\$29.97	\$23.27	\$20.98	\$19.22	\$18.79	\$19.75	\$21.28	\$31.45	\$51.86
Residential SWG Magma	\$75.18	\$58.68	\$46.03	\$28.92	\$23.27	\$20.98	\$19.22	\$18.79	\$19.75	\$21.21	\$28.10	\$45.83